

Docket No.: M4065.0361/P361

(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of: Whonchee Lee, et al.

Application No.: 09/653,411

Group Art Unit: 2815

Filed: August 31, 2000

Examiner: Joseph H. Nguyen

For:

ELECTRO-MECHANICAL POLISHING

OF PLATINUM CONTAINER

STRUCTURE

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT (IDS)

U.S. Patent and Trademark Office 2011 South Clark Place Customer Window Crystal Plaza Two, Lobby, Room 1B03 Arlington, VA 22202

Dear Sir:

Pursuant to 37 CFR 1.56, the attention of the Patent and Trademark Office is hereby directed to the references listed on the attached PTO/SB/08. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the references be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

This Supplemental Information Disclosure Statement is filed before the mailing date of a first Office Action on the merits as far as is known to the undersigned.

A copy of each reference on PTO/SB/08 is attached.

A concise explanation of relevance of the items listed on form PTO/SB/08 is:

[x] not given

[]	given for each listed item
[]	given for only non-English language listed items
[]	in the form of an English language copy of a Search Report from a foreign patent office, issued in a counterpart application, which refers to the relevant portions of the references

The Examiner's attention is also directed to U.S. Application No.: 09/651,779, filed August 30, 2000, U.S. Application No.: 10/090,869, filed March 4, 2002, U.S. Application No.: 10/230,463, filed August 29, 2002, U.S. Application No.: 10/230,628, filed August 29, 2002, U.S. Application No.: 10/230,602, filed August 29, 2002, U.S. Application No.: 09/653,392, filed August 31, 2000, and U.S. Application No.: 09/651,808, filed August 30, 2000.

This Supplemental Information Disclosure Statement is not intended to constitute an admission that any patent, publication or other information referred to therein is "prior art" unless specifically designated as such.

In accordance with 37 CFR 1.97(g), the filing of this Supplemental Information Disclosure Statement shall not be construed to mean that a search has been made. It is submitted that the Supplemental Information Disclosure Statement is in compliance with 37 CFR 1.98 and the Examiner is respectfully requested to consider the listed references.

The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 04-1073, under Order No. M4065.0361/P361. A duplicate copy of this paper is enclosed.

Dated: November 20, 2003

Respectfully submitted,

Thomas I D'Amico

Registration No.: 28,371

DICKSTEIN SHAPIRO MORIN &

OSHINSKY LLP

2101 L Street NW

Washington, DC 20037-1526

(202) 828-2232

Attorney for Applicants

PTO/SB/08A (10-01)
Approved for use through 10/31/2002.OMB 0651-0031
U. S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Su	bstitute for form 1449A/PTO		· · · · · · · · · · · · · · · · · · ·	Complete if Known		
"				Application Number	09/653,411	
l li	NFORMATION	I DI	SCLOSURE	Filing Date	August 31, 2000	
9	STATEMENT I	3Y A	APPLICANT	First Named Inventor	Whonchee Lee	
				Art Unit	2815	
	(use as many sh	eets as	necessary)	Examiner Name	Joseph H. Nguyen	
Sheet	1	of	3	Attorney Docket Number	M4065.0361/P361	

	U.S. PATENT DOCUMENTS						
Examiner Initials*	Cite No.1	Document Number Number-Kind Code ² (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear		
	AA	2001/0036746	11-01-2001	Sato et al.	3		
	AB	2002/0025759	02-28-2002	Lee et al.	<u> </u>		
	AC	2002/0025760	02-28-2002	Lee et al.			
	AD	2002/0025763	02-28-2002	Lee et al.			
	ΑE	2002/0052126	05-02-2002	Lee et al.			
	AF	2002/0070126	06-13-2002	Sato et al.			
	AG	2003/0054729	02-20-2003	Lee et al.			
	AH	2003/0109198	06-12-2003	Lee et al.			
	Al	2003/0129927	07-10-2003	Lee et al.			
<u> </u>	AJ	4,839,005		Katsumoto et al.			
	AK	5,244,534	09-14-1993	Yu et al.			
	AL	5,300,155	04-05-1994	Sandhu et al.			
	AM	5,567,300	10-22-1996	Datta et al.			
	AN	5,575,885		Hirabayashi et al.			
	AO	5,618,381	04-08-1997	Doan et al.			
	AP	5,676,587	10-14-1997	Landers et al.			
	AQ	5,681,423	10-28-1997	Sandhu et al.			
	AR	5,780,358	07-14-1998	Zhou et al.			
	AS	5,807,165	09-15-1998	Uzoh et al.			
	AT	5,840,629	11-24-1998	Carpio			
	AU	5,846,398	12-08-1998	Carpio			
	AV	5,863,307	01-26-1999	Zhou et al.			
	AW	5,897,375	04-27-1999	Watts et al.			
	AX	5,911,619	06-15-1999	Uzoh et al.			
	AY	5,930,699	07-27-1999	Bhatia			
	AZ	5,934,980	08-10-1999	Koos et al.			
	AA1	5,954,975	09-21-1999	Cadien et al.			
	AB1	5,954,997	09-21-1999	Kaufman et al.			
		5,972,792	10-26-1999				
		6,001,730	12-14-1999	Farkas et al.			
	AE1	6,010,964	01-04-2000	Glass			
	AF1	6,033,953	03-07-2000	Aoki et al.			
		6,039,633	03-21-2000	Chopra			
		6,046,099	04-04-2000	Cadien et al.			
	Al1	6,051,496	04-18-2000	Jang			
	AJ1	6,060,386	05-09-2000	Givens			
	AK1	6,060,395	05-09-2000	Skrovan et al.			
	AL1	6,063,306	05-16-2000	Kaufman et al.			
	AM1	6,066,030	05-23-2000	Uzoh			
	+	6,066,559	05-23-2000	Gonzalez et al.			
		6,068,787	05-30-2000	Grumbine e t al.			
		6,083,840	07-04-2000	Mravic et al.			
		6,100,197	08-08-2000	Hasegawa			
		6,103,628	08-15-2000	Talieh			
		6,117,781		Lukanc et al.			

MOA 5 0 5003

PTO/SB/08A (10-01)

Approved for use through 10/31/2002.OMB 0651-0031
U. S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute	e for form 1449A/P	то		Complete if Known		
		. •		Application Number	09/653,411	
INF	ORMATIC	DN DI	SCLOSURE	Filing Date	August 31, 2000	
STA	TEMENT	ГВҮ	APPLICANT	First Named Inventor	Whonchee Lee	
				Art Unit	2815	
	(use as many	sheets as	necessary)	Examiner Name	Joseph H. Nguyen	
Sheet	2	of	3	Attorney Docket Number	M4065.0361/P361	

	U.S. PATENT DOCUMENTS						
AT1	6,121,152	09-19-2000	Adams et al.				
AU1	6,143,155	11-07-2000	Adams et al.				
AV1	6,171,467	01-09-2001	Weihs et al.				
AW1	6,176,992	01-23-2001	Talieh				
AX1	6,187,651	02-13-2001	Oh				
AY1	6,196,899	03-06-2001	Chopra et al.				
AZ1	6,206,756	03-27-2001	Chopra et al.				
AA2	6,218,309	04-17-2001	Miller et al.				
AB2	6,250,994	06-26-2001	Chopra et al.				
AC2	6,273,786	08-14-2001	Chopra et al.				
AD2	6,276,996	08-21-2001	Chopra				
AE2	6,287,974	09-11-2001	Miller				
AF2	6,299,741	10-09-2001	Sun et al.				
AG2	6,313,038	11-06-2001	Chopra et al.				
AH2	6,328,632	12-11-2001	Chopra				
Al2	6,368,190	04-09-2002	Easter et al.				
AJ2	6,455,370	09-24-2002	Lane				
AK2	5,993,637	11-30-1999	Hisamatsu et al.				

		FOREIG	GN PATENT	DOCUMENTS		
Examiner	Cite	Foreign Patent Document Country Code ³ -Number ⁴ -Kind Code ⁵ (# known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant	-6
iniuais	NO.	Country Code* - Number - Kind Code* (If Known)			Figures Appear	_
	BA	EP 0 459 397 A2	12-04-1991	Naoto Miyashita		
	BB	JP 2001-077117	03-23-2001	Nogami Takeshi, et al.		
	ВС	WO 00/28586	05-18-2000	Dinesh Chopra		
	BD	WO 00/26443	05-11-2000	Homayoun Talieh		
	BE	WO 00/32356	06-08-2000	Homayoun Talieh		
	BF	WO 00/59008	10-05-2000	Homayoun Talieh		
	BG	WO 00/59682	10-12-2000	Homayoun Talieh		
	ВН	WO 02/064314	08-22-2002	Ismail Emesh, et al.		

¹ Applicant's unique citation designation number (optional). ² See attached Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the application number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁵ Applicant is to place a check mark here if English language Translation is attached.

NON PATENT LITERATURE DOCUMENTS							
Examiner Initials	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T²				
	CA	KONDO, S. et al., "Abrasive-Free Polishing for Copper Damascene Interconnection," Journal of the Electrochemical Society, Vol. 147, No. 10, pp. 3907-3913, (2000)					
	СВ	D'HEURLE, F.M. and K.C. PARK, IBM Technical Disclosure Bulletin, Electrolytic Process for Metal Pattern Generation, Vol. 17, No. 1, pp. 271-272, June 1974, XP-002235691, NN 7406271.					
	CC	FRANKENTHAL, R.P. and EATON, D.H., "Electroetching of Platinum in the Titanium-Platinum-Gold Metallization on Silicon Integrated Circuits," Journal of The Electrochemical					

PTO/SB/08B (10-01)

Approved for use through 10/31/2002.OMB 0651-0031

U. S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Su	bstitute for form 1449B/PT	0		Complete if Known		
		_		Application Number	09/653.411	
11	VFORMATION	V DIS	CLOSURE	Filing Date	August 31, 2000	
1 8	STATEMENT	BY A	PPLICANT	First Named Inventor	Whonchee Lee	
				Group Art Unit	2815	
	(use as many sh	neets as n	ecessary)	Examiner Name	Joseph H. Nguyen	
Sheet	3	of	3	Attorney Docket Number	M4065.0361/P361	

	Society Vol. 422 No. 5, pp. 702 706 May 1076 Poppington New Jersey
	Society, Vol. 123, No. 5, pp. 703-706, May 1976, Pennington, New Jersey.
	NON PATENT LITERATURE DOCUMENTS
CD	ABOAF, J.A. and R.W. BROADIE, IBM Technical Disclosure Bulletin, Rounding of Square-Shape Holes in Silicon Wafers, Vol. 19, No. 8, p. 3042, January 1977, XP-002235690, NN 77013042.
CE	BASSOUS, E., IBM Technical Disclosure Bulletin, Low Temperature Methods for Rounding Silicon Nozzles, Vol. 20, No. 2, July 1977, pp. 810-811, XP-002235692, NN 7707810.
CF	McGraw-Hill, "Chemical bonding," Concise Encyclopedia of Science & Technology, Fourth Edition, Sybil P. Parker, Editor in Chief, p. 367, McGraw-Hill, New York, New York, 1998.
cG	PhysicsWorld. Hard Materials (excerpt of Superhard superlattices) [online]. S. Barnett and A. Madan, Physics World, January 1998, Institute of Physics Publishing Ltd., Bristol, United Kingdom. Retrieved from the Internet on July 29, 2002. <url: 11="" box="" http:="" physicsweb.org="" world="" world-11-1-11-1="">.</url:>
СН	HUANG, C.S. et al., "A Novel UV Baking Process to Improve DUV Photoresist Hardness," pp. 135-138, Proceedings of the 1999 International Symposium on VLSI Technology, Systems, and Applications: Proceedings of Technical Papers: June 8-10, 1999, Taipei, Taiwan, Institute of Electrical and Electronics Engineers, Inc., September 1999.
CI	ATMI, Inc., adapted from a presentation at the Semicon West '99 Low Dielectric Materials Technology Conference, San Francisco, California, July 12, 1999, pp. 13-25.
C1	Micro Photonics, Inc. CSM Application Bulletin. Low-load Micro Scratch Tester (MST) for characterisation of thin polymer films [online]. 3 pages. Retrieved from the Internet on July 25, 2002. <url: http:="" mstabpoly.html="" www.microphotonics.com="">.</url:>
СК	Micro Photonics, Inc. CSM Nano Hardness Tester [online]. 6 pages. Retrieved from the Internet on July 29, 2002. <url: http:="" nht.html="" www.microphotonics.com="">.</url:>

Examiner	Date	
Signature	 Considered	

^{*}EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

^{&#}x27;Applicant's unique citation designation number (optional). ²Applicant is to place a check mark here if English language Translation is attached.